

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A differential for a wheeled motor vehicle, comprising:

a differential gear unit including pinion gears rotatably held by respective pinion shafts;

a differential case for housing therein the differential gear unit, the differential case having at an inner wall thereof grooves for respectively receiving therein the pinion shafts, the differential case being rotatable about a rotation axis thereof in normal and reverse directions at a position above an oil level of a lubricating oil, the differential case having an oil inlet opening formed therethrough, the oil inlet opening communicating the interior of the differential case with the outside of the same; and

an oil scooping up structure adapted to scoop up the lubricating oil to force the oil to enter the interior of the differential case through the oil inlet opening when the differential case rotates about the rotation axis in the normal direction,

wherein the oil scooping up structure comprises:

first projected portions formed on an outer surface of the differential case at portions that support the pinion shafts through the grooves, the first projected portions having an inclined surface at a leading side thereof with respect to the normal rotation direction, the inclined surface defining an acute angle relative to a tangential line of the outer surface of the differential case at a center point of the respective projection portion.

2. (Canceled)

3. (Previously Presented) A differential as claimed in Claim 1, in which the oil scooping up structure is integral with a major portion of the differential case.

4. (Currently Amended) A differential as claimed in Claim 1, in which the differential case is produced through a forging technique that provides for a **relatively** thin wall of the differential case ~~to be obtained~~.

5. (Previously Presented) A differential as claimed in Claim 1, in which the oil scooping up structure is shaped to push the lubricating oil toward the oil inlet opening when the differential case rotates in the normal direction.

6. (Canceled)

7. (Previously Presented) A differential as claimed in Claim 5, in which the oil inlet opening is positioned at a leading side of a respective first projected portion with respect to the normal rotation direction.

8. (Previously Presented) A differential as claimed in Claim 7, in which at least a trailing part of a peripheral edge surface of the oil inlet opening defines an obtuse angle relative to a tangential line of the outer surface of the differential case at a center point of the oil inlet opening.

9. (Currently Amended) A differential as claimed in Claim 7, in which ~~a second projected portion is~~ two second projected portions are formed on the outer surface of the differential case at a diametrically opposed position with respect to ~~at least one of the first projected portions~~ each other, the ~~second projected portion~~ two second projected portions being substantially the same in shape ~~as at least one of the first projected portion~~, and in which another oil inlet opening is formed in the differential case, which is positioned at a leading side of one of the second projected portions ~~second projected portion~~ and is substantially the same in shape as the oil inlet opening positioned at the leading side of the respective first projected portion.

10. (Currently Amended) A differential as claimed in Claim 5, in which the oil scooping up structure further comprises at least one ~~relatively thick~~ wall portion provided by the differential case at a trailing position of another oil inlet opening formed in a trailing location, the ~~relatively thick~~ wall portion having an inclined surface at a leading side thereof

with respect to the normal rotation direction, the inclined surface defining an acute angle relative to the tangential line of the outer surface of the differential case.

11. (Previously Presented) A differential as claimed in Claim 10, in which at least a trailing part of a peripheral edge surface of said another oil inlet opening defines an acute angle relative to the tangential line of the outer surface of the differential case at a center point of said another oil inlet opening.

12. (Withdrawn) A differential as claimed in Claim 1, in which the oil scooping up structure comprises at least one raised up wall portion provided by the differential case at a trailing position of the oil inlet opening with respect to the normal rotation direction, the raised up wall portion having an inclined surface at a leading side thereof with respect to the normal rotation direction, the inclined surface defining an acute angle relative to the tangential line of the outer surface of the differential case at the raised up wall portion.

13. (Withdrawn) A differential as claimed in Claim 12, in which at least a trailing part of a peripheral edge surface of the oil inlet opening defines an acute angle relative to the tangential line of the outer surface of the differential case at a center point of the oil inlet opening.

14. (Withdrawn) A differential as claimed in Claim 13, in which the raised up wall portion is a separate member which is detachably connected to the oil inlet opening.

15. (Withdrawn) A differential as claimed in Claim 1, in which the oil scooping up structure comprises at least one of the first projected portions formed on the outer surface of the differential case, the at least one first projected portion having at a leading side wall a trailing part of the oil inlet opening.

16. (Withdrawn) A differential as claimed in Claim 1, in which the oil scooping up structure comprises a corrugated inner surface of a given portion of the differential case, the given portion extending around the rotation axis, corrugations of the corrugated inner surface being inclined toward the normal rotation direction.

17. (Withdrawn) A differential as claimed in Claim 16, in which the corrugated inner surface comprises:

a plurality of rounded bank portions that are arranged around the rotation axis defining between adjacent bank portions an oil guide groove that extends radially inward toward the rotation axis, the rounded bank portions being inclined relative to the normal rotation direction;

a plurality of raised portions that are arranged in a path of the rounded bank portions, the raised portions being inclined relative to the normal rotation direction; and

a plurality of guide grooves provided on an annular bearing projection of the differential case, the annular bearing projection bearing a side gear and the plurality of guide grooves being inclined relative to the normal rotation direction.

18. (Withdrawn) A differential as claimed in Claim 17, in which an inclination of the respective guide grooves defined by the adjacent rounded bank portions is such that a distance between an outer end of respective guide grooves and the rotation axis is greater than a distance between an inner end of the respective guide grooves and the rotation axis and the outer end of the respective guide grooves is positioned at a leading side with respect to an imaginary line that passes through the inner end of the respective guide grooves and the rotation axis.

19. (Withdrawn) A differential as claimed in Claim 18, in which an inclination of the respective raised portions is so made that a distance between an outer end of respective raised portions and the rotation axis is greater than a distance between an inner end of respective raised portions and the rotation axis and the outer end of the respective raised portions is positioned at a leading side with respect to an imaginary line that passes through the inner end of the respective raised portions and the rotation axis.

20. (Withdrawn) A differential as claimed in Claim 19, in which the inclination of the guide grooves is so made that a distance between an outer end of the respective guide grooves and the rotation axis is greater than a distance between an inner end of the respective

guide grooves and the rotation axis and the outer end is positioned at a leading side with respect to an imaginary line that passes through the inner end of the respective guide grooves and the rotation axis.

21. (Withdrawn) A differential as claimed in Claim 1, in which the oil inlet opening is formed in an axial end portion of the differential case, and the oil scooping up structure comprises at least one rib formed on the outer surface of the axial end portion of the differential case such that when the differential case rotates, the rib is rushed into the oil level and pulled up from the oil level to dip up and force the lubricating oil to flow toward the oil inlet opening.

22. (Withdrawn – Currently Amended) A differential as claimed in Claim 21, in which an inner surface of the ~~axis~~ axial end portion of the differential case is formed with at least one oil guiding path through which the lubricating oil is guided from the oil inlet opening to an annular bearing projection, the annular bearing projection bearing a side gear.

23. (Withdrawn) A differential as claimed in Claim 22, in which the oil guiding path comprises:

a first guide groove that extends from the oil inlet opening to a recessed end near the annular bearing projection;

a second guide groove formed on a leading end of the annular bearing projection;

a third guide groove formed on a cylindrical outer surface of the annular bearing projection; and

a circular guide groove formed on the leading end of the annular bearing projection.

24. (Original) A differential as claimed in Claim 1, in which the differential case is of a split type including a first case half and a second case half which are coupled together.

25. (Original)            A differential as claimed in Claim 1, in which the differential gear unit is of a type having four pinion gears and two side gears.

26. (Original)            A differential as claimed in Claim 1, in which the differential gear unit is of a type having two pinion gears and two side gears.

27. (Currently Amended)    A differential case for a differential of a wheeled motor vehicle, comprising:

          a case proper, the case proper being adapted to house therein a differential gear unit, the case proper having at an inner wall thereof grooves for respectively receiving therein pinion shafts that rotatably hold pinion gears, respectively, wherein, with respect to a portion of the case proper, the portion of the case proper has an oil inlet opening formed therethrough, the oil inlet opening communicating the interior of the case proper with the outside of the same; and

          an oil scooping up structure integrally formed by the case proper for scooping up a lubricating oil to force the same to enter the interior of the case proper through the oil inlet opening when rotated in the lubricating oil about a rotation axis thereof,

          wherein the oil scooping up structure comprises:

          first projection portions formed on an outer surface of the case proper at portions that support the pinion shafts through the grooves, the first **projected projection** portions having an inclined surface at a leading side thereof with respect to the normal rotation direction, the inclined surface defining an acute angle relative to a tangential line of the outer surface at a center point of the projection portions.

28. (Previously Presented)    A differential case as claimed in Claim 27, in which the oil scooping up structure is shaped to increase forcing of the lubricating oil toward the oil inlet opening when the case proper is rotated about the rotation axis in a normal direction that induces a forward movement of the motor vehicle.

29. (Original) A differential case as claimed in Claim 28, in which the case proper is of a split type including a first case half and a second case half which are coupled together.

30. (New) A differential as claimed in Claim 1, in which respective cavities are present in the first projected portions forming the grooves, the cavities extending in a radial direction away from the rotation axis and terminating at a first distance from the rotation axis, the first distance being greater than a maximum distance of the oil inlet opening from the rotation axis.

31. (New) A differential case as claimed in Claim 27, in which respective cavities are present in the first projection portions forming the grooves, the cavities extending in a radial direction away from a rotation axis of the differential case and terminating at a first distance from the rotation axis, the first distance being greater than a maximum distance of the oil inlet opening from the rotation axis.

32. (New) A differential as claimed in Claim 30, in which the pinion shafts are located in the respective cavities.

33. (New) A differential case as claimed in Claim 31, in which the pinion shafts are located in the respective cavities.

**Amendments to the Specification:**

Please amend the specification as follows:

- Please replace the last paragraph on page 9 with the following rewritten paragraph:

More specifically, as is seen from the **drawing drawings**, the leading inclined surface 13c of each first projected portion 13a defines an acute angle  $\theta 1$  (viz., an angle smaller than 90 degrees) relative to a tangential line L1 of the outer surface CR at a center point of the first projected portion 13a. As shown, preferably, an inclined surface of each first projected portion 13a, that is positioned at a trailing side of the portion 13a with respect to the normal rotation direction, defines an obtuse angle (viz., an angle greater than 90 degrees)  **$\theta 3$**  relative to the outer surface CR of differential case 5. However, in the present invention, the angle of the trailing inclined surface is not limited to such obtuse angle.

- Please replace the second full paragraph on page 10 with the following rewritten paragraph:

More specifically, as is seen from the **drawing drawings**, the inclined peripheral edge surface 18a of each first circular opening 17a defines an obtuse angle  **$[\theta 1]$**   **$\theta 3$**  (viz., an angle greater than 90 degrees) relative to a tangential line L2 of the outer surface CR at a center point of the first circular opening 17a.

- Please replace the third full paragraph on page 10 with the following rewritten paragraph:

In the illustrated embodiment, the inclined surface 18a with the obtuse angle  **$[\theta 1]$**   **$\theta 3$**  is evenly made throughout the entire periphery of the first circular opening 17a. However, if desired, such inclined surface 18a may be provided at only a portion that is near the first projected portion 13a. That is, the inclined surface that is far from the first projected portion 13a may have an angle smaller than 90 degrees.



**Amendments to the Drawings:**

Please replace the drawing sheet bearing Fig. 4(A) and Fig. 4(B) with the corresponding revised drawing sheet presented in Appendix A of this paper.

The specific changes which have been made to Figure 4(B) is the incorporation of an angle symbol along with the identifier " $\theta_3$ ".